DOCUMENT RESUME

ED 055 602 LI 003 156

AUTHOR Bennett, J. M.
TITLE Roles of International Organisations: University Aid Programs for the Transfer of Computer Technology.
SPONS AGENCY United Nations, New York, N.Y.
PUB DATE Oct 69
NOTE 32p.; (2 References); Background paper prepared for the United Nations meeting of the Ad Hoc Panel of Experts on Computer Technology held in February 1970

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Computers; *Computer Science; Developing Nations; Economic Development; Equipment; *International Organizations; International Programs; *Personnel; Social Development; *Technology; *Training
IDENTIFIERS Australia; Southeast Asia; United Nations

ABSTRACT

The discussion of the contribution Australian universities might make in introducing computer technology to the developing countries draws upon over 20 years of experience with students from Southeast Asia. The results of several studies of the performances of these students both while in Australia and after returning to their own countries have become available. The problem discussed by these students are as relevant to electronic data processing training as to training in other technical fields. Thus the main relevant points are summarized here. The figures show that Asian students do not perform well in comparison with Australians. Possible reasons for this are: language problems, the emphasis on rote learning among Asian students, and differences in cultural backgrounds. On returning home, students are faced with difficulties in trying to exercise their acquired skills because of: changes in the governments' policy and lack of recognition of Australian qualifications. Desirable mechanisms of training include: fostering paired university departments, provision of computing equipment for training, advice in setting up sub-graduate and undergraduate training programs, assistance in providing technical literature and provision of computer time to universities without computers. (NH)

ED055602

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

BASSER COMPUTING DEPARTMENT

School of Physics
The University of Sydney

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY

United Nations

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER"

ROLES OF INTERNATIONAL ORGANISATIONS:

UNIVERSITY AID PROGRAMS FOR THE TRANSFER OF COMPUTER TECHNOLOGY

by

J.M. Bennett

TECHNICAL REPORT NO.59

October, 1969

LI 003 156

FOREWORD

This document was prepared in response to a request from the United Nations Secretariat.

This request arose from a resolution of the U.N. General Assembly asking the Secretariat to prepare a report which will give special consideration to the situation of the developing countries with regard to:

(a) the results already obtained and the needs and prospects for the use of electronic computers in accelerating the process of economic and social development;

(b) the various forms which international action may take to intensify cooperation in the field of computers;

(c) the role which the United Nations can play in promoting international cooperation in that field, with emphasis on questions concerning the transfer of technology, the training of personnel and technical equipment."

ROLES OF INTERNATIONAL ORGANISATIONS: UNIVERSITY AID PROGRAMS FOR THE TRANSFER OF COMPUTER TECHNOLOGY

by

John M. Bennett

THE AUSTRALIAN SCENE

As a member of the Council of the Australian Computer Society, and its IFIP liaison officer, the author was concerned with the preparation of the A.C.S. reply to the request of the President of IFIP for information which might be included in his comments on the United Nations motion concerning the transfer of computer technology to developing countries.

The overall picture presented in the A.C.S. letter is that Australia, with a negligible computer manufacturing industry, has a computer count per head which compares favourably with the more advanced countries of Western Europe. Although the bulk of the early usage was for routine accounting work, the number of sophisticated management and technical applications is increasing.

Of those who are working professionally in the field (i.e., excluding operators and other support personnel), about a third are graduates. (In comparing this figure with the proportion of graduates among professional E.D.P. personnel elsewhere, the reader should bear in mind the pattern of tertiary education in the countries concerned. Thus, in Australia, the current total university enrolment is over

100,000 in a population of 12 million (Australian Universities Commission, 1969), i.e., 0.8 per cent, whereas the equivalent U.S. figure is about 3 per cent (Tickson, 1968). As a proportion of the 17-22 age group, the Australian figure is about 7 per cent, the corresponding U.S. figure for the 18-24 age group being about 30 per cent.)

The ratio of graduate to non-graduate professionals does not reflect the formal educational training in E.D.P. as so many practitioners have learned their skills "on the job" with the help of manufacturers' courses or in-house training provided by large firms. Formal courses at tertiary level (Australian Computer Society, 1969) are available at universities and at recently instituted colleges of advanced education.

The colleges of advanced education are expected to play an increasing part in the tertiary education. However, it is too early to assess the ultimate role of these bodies, which is likely to be determined primarily by preferences of students.

ASIAN AND OTHER FOREIGN STUDENTS IN AUSTRALIA

The author's assignment is to discuss the contribution Australian universities might make in introducing computer technology to the developing countries. In examining this question, it is possible to draw on over twenty years of experience with students from various countries in South-East Asia. These students have come to Australia under various scholarship schemes (mainly Colombo Plan

Scholarships) or privately, and recently the results of several studies (Hodgkin, 1966; Keats, 1969a,b) of the performance of these students, both while in Australia and after returning to their own countries, have become available.

These studies discuss problems which are as relevant to E.D.P. training as to training in other technical fields. Moreover, they examine a number of issues which are specific to the Australian scene. For this reason, the main relevant points will be summarised here.

Although later figures are no doubt available, the following information will give an adequate picture of the general situation concerning foreign students in Australia as it exists at the present time.

In 1962, there were 12,049 foreign students in Australia. Of these, 9.5 per cent were sponsored by the Colombo Plan and other student aid schemes, and the rest were privately financed. Of the private students, 25.9 per cent were at universities, and 6.3 per cent were engaged in other tertiary training. A high proportion of the private students in secondary schools were studying for matriculation examinations with a view to completing a university course. Of the sponsored students, 56.3 per cent attended universities and 8.2 per cent were taking technical courses. Annexe 1 gives further details of the activities and origin of private overseas students.

It will thus be seen that the major emphasis for sponsored students has been in university training. Annexe 2

shows the current university position. From the first table, it will be seen that university students from developing countries (nearly all of whom come from South-East Asia) represent about 8 per cent of current full time enrolments, and about a quarter of these (including Colombo Plan students) are sponsored by the Commonwealth Government. Annexe 2 also shows the courses taken by these overseas students, about 90 per cent of whom come from developing countries, and how students are divided among the various faculties according to their country of origin in one university (Australia's largest).

The postgraduate student population of Australian universities is 11 per cent of the total, and overseas students (mainly from developing countries) represent 11 per cent of this number (A.U.C., 1966).

Numbers of Asian students taking formal credit courses in Automatic Computing are not available for all universities. For the University of Sydney, Asian students represented 3 per cent of students taking undergraduate courses, about a quarter of the students taking a postgraduate diploma, the overall figure (with 14 Asian students) being 6 per cent. (It is possible that the high proportion of Asians taking the postgraduate diploma is related to the fact that candidature for this diploma enables students to extend the period of their entry visas.)

PERFORMANCE OF ASIAN STUDENTS

Available figures show that Asian students do not perform well in comparison with Australians. Western Australian figures for Malaysian students show (for rather small samples) that the proportion who graduate in periods taken "on average" to complete degrees varies between about a third (for science) to less than a tenth (for engineering) of the proportion for Australian students. However, the situation for sponsored students is very different: these students, who are carefully selected, appear to perform rather better than their Australian peers. Thus, in 1961 (Department of Education and Science, 1969) Australian students had a first year pass rate of 65 per cent compared with 73 per cent for Colombo Plan students, and of Australian students commencing in that year, 40 per cent graduated in minimum time compared with 50 per cent for Colombo Plan students.

On the whole, there appears to be more emphasis on rote learning among Asian students than among Australians. This is coupled with a widely recognised difficulty in getting Asians to engage in the 'thrust and parry' of discussion which is so necessary if students are to get the most from their university years.

Various reasons have been advanced in the literature for these shortcomings. Among these should be mentioned the following.

(1) Language problems exist. In one sample (Keats, 1969a) only 36 per cent of the students interviewed had had

English as the language of instruction throughout their schooling, and 30 per cent had received their secondary schooling in languages other than English. Under such circumstances, without more intensive tutorial assistance than is available to Australians, Asians are at a considerable disadvantage.

(2) A large number of overseas students are given immigration visas to enrol in secondary schools in Australia, although such facilities are available on a competitive basis in their own countries. A high proportion of Malaysian secondary school pupils who come to Australia, for example, do so because they are unable to proceed to higher education at home because of failure at earlier stages. Such a negative selection process will inevitably depress overall pass rates.

(3) Australia is rarely a student's first choice: U.K., the U.S. and Holland tend to be preferred because of traditional ties, and Canada and the U.S. have greater appeal because better facilities are available there.

(4) The rote learning approach appears to be a feature of traditional Chinese schooling. This is consistent with a respect for authority (both parental - which affects the choice of career - and community) among Asian students which is much greater than among their Australian peers.

The effectiveness of cross-cultural contacts increase during their stay in Australia, as is evidenced by increasing

membership of various university societies (usually the less popular ones) in later years. However, by Australian standards, Asian membership of university clubs and societies is low. Differences in cultural backgrounds, personal problems and concern for the future play a major part in determining the usefulness of a student's stay here. Examples follow.

(1) Students come from households where domestic servants are the rule rather than the exception. (Three-quarters of private students, a third of scholarship holders come from households with at least one servant.) As a result, friction with landladies in servant-less Australia is not unusual, and is exacerbated by different eating and toilet customs.

(2) Financing arrangements sometimes lead to difficulties with older students with families. Men whose families are at home try to support them by savings from their scholarships, and concern for absent spouses and children considerably reduces the effectiveness of study. Apparently sponsoring bodies are showing an increasing awareness of such problems in deciding funding arrangements for married students.

(3) Often Asian students show signs of depression towards the end of their stay, as the immediate well defined goal of their degree nears achievement and problems of their homecoming assume increasing importance. Three very real issues should be mentioned in this connection:

(a) long separation leads to the inevitable feeling of loss of orientation (which could be minimised by financing yearly home visits),

(b) there is often a fear of racial discrimination in job selection, such as that which applies in favour of Malays in Malaysia, and

(c) the effects of changing government policy ~~which~~ may have removed the need for the particular skill which a student has just acquired (e.g., the decision of the Indonesian Government not to build up a local aircraft industry, in anticipation of which the training of a number of aernautical engineers was initiated).

Before returning home, students are permitted, by the terms of their immigration visas, to spend two years after graduation acquiring practical experience, and often take advantage of this arrangement. However, from the point of employers - particularly small firms - limited term arrangements of this type are not particularly attractive, and placement problems occur in some fields.

THE RETURN HOME

Ideally, returned students should be given every opportunity to exercise their acquired skills in enabling their country to take advantage of western technological advances. However, in practice, a number of difficulties occur.

The first of these is the effect of changes of policy of the governments concerned, a point which has already been

noted. The effects of such changes are particularly noticeable in Indonesia, where in a recent study (Keats, 1969b) over a third of the 115 ex-Colombo Plan students interviewed reported unemployment periods of over three months on return. Moreover, a high proportion of this group (about 20 per cent in the case of the first job) was forced by economic conditions to take subsidiary jobs. Not unnaturally, Indonesian graduates are apprehensive about their future, and the extent to which they are refusing to return has been a major source of concern to the Indonesian Government (de Iongh, 1969). Moreover, students trained abroad who find their acquired skills are not wanted at home seek to re-emigrate to some other country where the grass seems greener.

A second difficulty arises from the recognition of Australian qualifications, which were unknown to Asian employees before 1946. The existing patterns at that time had been determined by the colonial orientation of the country concerned, and many senior engineers and other professionals have been trained under this system. For this reason, it is not surprising to find that honours and four year degrees are preferred, that the significance of post-graduate diplomas is not well understood, and that sub-graduate qualifications and certificates attesting to the completion of special courses are of little value. Engineering diplomates from institutes of technology, for example, find themselves at a disadvantage compared with graduates in

obtaining membership of English engineering institutions, a near-necessity for promotion in countries with a British colonial background.

No particular emphasis is placed on Asian conditions in Australian degree courses, and adapting his training to the needs of his country is a matter for the returnee. Here, success depends on encouragement from superiors, and complaints on this score are surprisingly few, although it has been remarked that influence on critical decisions tends to be dependent on access, through kinship or social position, to those in authority.

However, the main problem is the lack of technical support - of skilled assistants and equipment. Delays in obtaining equipment necessary for their work stem from lengthy procurement processes not set in train until the returnee's arrival, and currency shortages. And the shortage of technical assistance can only be rectified by building up subgraduate and trade training courses locally. In fact, in the absence of formal institutions, skilled assistants are trained on the job. Two-thirds or more of Colombo Plan returnees questioned in various countries in one survey (Keats, 1969) said they taught or trained others in some way. It is clear that help given in the building up of local sub-graduates of this type will do much to increase the effectiveness of any more sophisticated training.

Special situations arise in the case of government appointments in Malaysia and Indonesia, where Malays are given

preference over non-Malays, and in Hong Kong, where indigenous Chinese feel that senior government appointments are not open to them. These policies are particularly relevant to willingness of students to return home on the completion of their training.

A frequently voiced request concerns the availability of technical literature. Colombo Plan returnees from Australia have three years' subscription to the relevant Australian professional society paid for them. However, at the end of that time, an unduly high proportion find they cannot afford to continue their subscription, and so cease to receive their society's journal. A small amount of help in ensuring the continuing supply of professional literature would do much to help returnees keep up to date in their chosen field.

Much more deep-seated problems have evidenced themselves, however. For close interaction does not necessarily lead to tolerance, and it has been noted that many Asians whose educational performance has been poor have emerged from their period in Australia with feelings of separateness from the Australian community which are at least as strong as they were when they arrived. Moreover, an Asian who does not obtain the qualification he sets out to achieve suffers considerable loss of face when he returns home - and this is particularly true of the Chinese.

A more serious matter is the distrust of western style education which is evident among some of the more

nationalistic groups. There is a widespread feeling that anyone educated at a foreign university cannot become a leader because he has lost touch with the needs of the community. And when, because of inexperience or lack of judgement, a foreign-trained graduate advocates unacceptable changes, this distrust is reinforced. Proposals for change may also sometimes founder on ethnic grounds - e.g., when agricultural reforms for a Malay community are proposed by a Chinese expert - and are likely to be more acceptable if put forward by someone with sufficient prestige. It is unrealistic to ignore factors of this sort when assessing the success of schemes such as the Colombo Plan.

At least one observer (de Iongh, 1969) has gone so far as to say that "the training of students in Australia under Colombo Plan Scholarships or the like has to some extent failed in its objective". The recognition of the existence of highly sensitive nationalist feelings is important: any scheme which comes to be labelled as "neo colonialism" or "cultural imperialism" is under a considerable disadvantage.

More intergovernmental coordination, though of course essential, is too remote from the operating level to be effective, so it is clear that any alternative to Colombo Plan type schemes should work through existing local institutions where possible.

Such proposals are not new, though the details may vary (e.g., Ackoff (1969). The writer's preference is for an arrangement in which staff are interchanged

between pairs of universities ("sister universities) for periods of one or two years, and research students from the university in the developing country spends one or two years at the sister university, for which they are given credit by their home university. Such an arrangement presupposes close ties at the departmental level, as its success will clearly depend on senior members of each group having a detailed knowledge of both sets of local conditions.

RELEVANCE TO COMPUTER SCIENCE

The preceding general remarks are as relevant to the introduction of Computer Science to developing countries as to any other form of technology. The economies of the countries concerned will be labour-intensive, and so, as recent Indian experience has made clear, it is undesirable to emphasise those aspects of automatic computing which will lead to the saving of labour. However, the use of computers in economic planning and in large scale engineering design should do much to help developing countries to reap the benefits of western technology. It is therefore the training of experts in such fields which should receive highest priority.

Desirable mechanisms of training have been discussed above. Fostering of paired university departments, provision of computing equipment for training purposes, advice in the setting up of sub-graduate and undergraduate training programs, and assistance in the provision of technical literature, should be emphasised again. And the provision of computer time at university computing centres for work originating from universities without facilities of their own, would do much to

encourage various specialists to try out computer oriented techniques.

The proposal for paired university departments is made in the knowledge that its speed of implementation must depend on local conditions. In some countries, for example, anyone without a foreign degree is at a considerable disadvantage as far as promotion is concerned. However, in the long run, it is clearly desirable that this attitude should change, and that the standards of local universities should be built up, and the pairing proposal should help to do this.

What can United Nations do to help? Clearly, all of the above suggestions call for organisation and can only be carried out if adequate funding is available. Moreover, fostering the pairing of university departments requires some organisation to act as a clearing house for indications of willingness to cooperate and requests for help. One possibility is that a U.N. mandate be given to IFIP to act in this way. Another is that, as far as Australia is concerned, the U.N. could make use of a scheme currently being considered by the Australian Vice Chancellors' Committee (see Annexe 3) which seems to provide the necessary coordinating machinery.

ANNEXE 1
Extr. Hodgkin, Mary C.: Australian Training and Asian Living. Univ.W.A. Press, 1966

14.

DISTRIBUTION OF PRIVATE OVERSEAS STUDENTS BY COUNTRY OF ORIGIN AND TYPE OF EDUCATION IN 1962

TABLE 4

Country Of Origin	University (including Post graduate)	Tertiary Technical	Secondary	Primary	General Nursing & Accountancy etc.	Total
Malaya and Singapore	1649	907	1371	31	1111	5069
Hong Kong	675	623	1321	289	506	3614
Thailand	33	46	116	5	70	270
Borneo	87	51	88	6	63	295
Indonesia	70	25	47	3	25	170
India	96	13	11	1	13	134
Others	220	118	508	101	404	1351
TOTAL	2830	1783	3662	436	2192	10903

SOURCE: Commonwealth Department of Immigration.

REFERENCES

Ackoff, R.L.: Towards an Idealised University, University of Pennsylvania Management Science Center, 1968.

Australian Department of Education and Science: Private Communication, 1969.

Australian Universities Commission: Fourth Report, May 1969.

de Iongh, R.C.: Prospects for Inter-University Cooperation between Australia and Indonesia, Vestes, 12, 2, 1969, pp.165-175.

Hodgkin, Mary C.: Australian Training and Australian Living, University of Western Australia Press, 1966.

Keats, Daphne M.: A Cross-Cultural Study of the Development of Cognitive Structures in University Students, with Special Reference to Asian Students in the University of Queensland, Ph.D. Thesis, March 1969.

Keats, Daphne M.: Back in Asia (to be published by the Australian National University).

Tickson, S.G.: The Magnitude of American Higher Education in 1980, article in Campus 1980, edited by A.C. Eurich, Delacorte Press, 1969.

University of Sydney: Staff Numbers, Student Numbers, 1969, June 1969.

TR59

8. OVERSEAS STUDENTS IN AUSTRALIA
AS AT 31ST MARCH, 1965.

Source: Department of External Affairs.

TABLE 1.

State	Privately Financed	Colombo Plan	TOTAL
N.S.W.	4,692	493	5,185
Victoria	3,502	262	3,764
Queensland	885	167	1,052
South Australia	576	109	685
Western Australia	1,034	84	1,118
Tasmania	204	99	303
A.C.T.	133	35	168
Northern Territory	19	1	20
Ad. Hoc.		61*	61
	11,045	1,311	12,356

* Ad. Hoc., indicates students who are not continuously resident in any one State.

ASIAN STUDENTS RELATIVE TO THE TOTAL POPULATION
IN AUSTRALIAN STATES

TABLE 2.

State	Population [1]	Asian Students [2]	Percentage
New South Wales	4,048,958	5,185	0.128
Victoria	3,055,781	3,764	0.112
Queensland	1,566,218	1,052	0.067
South Australia	1,008,994	685	0.068
Western Australia	772,511	1,118	0.145
Tasmania	361,320	303	0.084

1. Figures obtained from The Australian Official Handbook 1964.
2. Figures from External Affairs Department March 1965 (Table 1).

ANNEXE 2.1
Extr. A.U.C. Fourth Report, May 1969

OVERSEAS STUDENTS

2.25 Information in this section of the Report relates to overseas students attending universities in Australia. Tables are included which show the numbers who were sponsored under the Colombo Plan or other Commonwealth Government schemes for assisting overseas students, those not sponsored by the Commonwealth Government, the courses for which overseas students were enrolled in Australian universities and the countries from which they came.

2.26 The growth since 1959 in the total number of overseas students enrolled in universities in Australia can be seen in Table 14. In 1968 the total had increased to 5,429 but this represented the lowest proportion of all full-time students enrolled since 1959.

TABLE 14. PERCENTAGE OF TOTAL OVERSEAS STUDENTS TO FULL-TIME ENROLMENTS IN AUSTRALIAN UNIVERSITIES, 1959–68

Year	Number of overseas students at universities	Percentage of full-time enrolments at universities
1959	2,352	8.3
1960	2,871	9.1
1961	3,272	10.6
1962	3,895	11.2
1963	4,174	10.7
1964	4,502	10.2
1965	4,908	9.8
1966	5,007	8.9
1967	5,380	9.2
1968	5,429	8.7

Source: 1959–1967—*Education News:* Vol. 7, No. 9 (June 1960); Vol. 8, No. 3 (June 1961); Vol. 8, No. 9 (June 1962); Vol. 9, No. 3 (June 1963); Vol. 9, No. 9 (June 1964); Vol. 10, No. 3 (June 1965); Vol. 10, No. 9 (June 1966); Vol. 11, No. 3 (June 1967); Vol. 11, No. 9 (June 1968).
1968—Universities.

2.27 Excluding the Australian National University, for which full details are not available, there were 4,994 overseas students at Australian universities in 1968, of whom 1,211 or 24.2 per cent were sponsored by the Commonwealth Government. The remainder were private students including those supported by their own country's student assistance schemes. The number of sponsored and private students at each university in 1968 is shown in Table 15.

17516/69—2

TABLE 15. GOVERNMENT SPONSORED OVERSEAS STUDENTS AND OTHER OVERSEAS STUDENTS AS A PERCENTAGE OF FULL-TIME ENROLMENTS IN AUSTRALIAN UNIVERSITIES, 1968

University	Sponsored by Commonwealth Government	Other *	Total overseas students	Total full-time enrolments	Percentage of overseas students to full-time enrolments
Sydney	93	595	688	12,136	5.7
New South Wales	264	1,106	1,370	7,990	17.1
New England	73	103	176	1,475	11.9
Newcastle	34	73	107	1,108	9.7
Macquarie	5	17	22	703	3.1
Melbourne	58	469	527	9,734	5.4
Monash	141	314	455	6,994	6.5
La Trobe	26	11	37	912	4.1
Queensland	158	298	456	6,957	6.6
Townsville	12	5	17	382	4.5
Adelaide	103	240	343	5,073	6.8
Flinders	4	30	34	1,065	3.2
Western Australia	138	407	545	4,078	13.4
Tasmania	102	115	217	1,787	12.1
A.N.U.	not available	not available	435	1,936	22.2
TOTAL	1,211	3,783	5,429	62,350	8.7

* Including students sponsored by their own Governments and Fulbright Scholars.

Source: Universities.

2.28 The majority of sponsored students come to Australian universities under the Colombo Plan; other schemes include the Commonwealth Scholarship and Fellowship Plan, Australian International Awards Scheme and the Special Commonwealth African Assistance Plan.

2.29 Table 15 shows that the Australian National University and the University of New South Wales have the largest proportions of overseas students while the more recently established universities, Macquarie, Flinders and La Trobe and the University College of Townsville have the smallest proportionate numbers. Over half of the 435 overseas students at the Australian National University are post-graduate students at the Institute of Advanced Studies.

2.30 Table 16 shows the courses of study in which students were enrolled at each university in 1968.

2.31 There were 1,146 post-graduate students from overseas enrolled in Australian universities in 1968. Undergraduate courses in engineering, economics/commerce, science, arts and medicine had the heaviest enrolments.

2.32 Table 17 shows the country of origin of the overseas students in 1968 and it can be seen that most came from Asia. Malaysia, Hong Kong, Singapore and Indonesia provided the greatest number [illegible] and accounted for 64 per cent of the total.

TABLE 16. OVERSEAS STUDENTS AT AUSTRALIAN UNIVERSITIES, BY COURSE OF STUDY, 1968

University	Post-graduate	Undergraduate																Total
		Agriculture	Applied Science	Architecture	Arts	Dentistry	Economics/ Commerce	Education	Engineering	Forestry	Law	Medicine	Public Administration	Pharmacy	Science	Veterinary Science	Other	
Sydney	232	9	—	17	96	28	41	2	81	—	16	65	—	19	50	12	—	688
New South Wales	202	—	115	73	105	—	169	10	343	—	—	179	11	—	141	—	22	1,370
New England	17	30	—	—	36	—	21	17	—	5	—	—	—	—	44	—	6	176
Newcastle	5	—	—	17	7	—	16	—	42	—	—	—	—	—	19	—	1	107
Macquarie	6	—	—	—	13	—	—	1	—	—	—	—	—	—	—	—	2	22
Melbourne	93	5	8	88	40	3	36	7	98	—	19	46	—	—	46	2	36	527
Monash	84	—	—	—	51	—	61	12	71	—	8	108	—	—	52	—	8	455
La Trobe	3	—	—	—	6	—	12	—	—	—	—	—	—	—	16	—	—	37
Queensland	77	8	—	12	48	11	42	13	35	—	3	62	—	4	39	42	60	456
Townsville	1	—	—	—	3	—	—	1	8	—	—	1	—	—	3	—	—	17
Adelaide	73	5	32	13	22	17	52	3	34	—	7	37	—	4	44	—	—	343
Flinders	10	—	—	—	10	—	5	—	—	—	—	—	—	—	9	—	—	34
Western Australia	46	20	—	5	60	20	112	14	122	—	4	22	—	—	120	—	—	545
Tasmania	12	15	—	—	58	—	31	6	40	—	6	1	2	1	45	—	—	217
A.N.U.	265	—	—	—	72	—	16	—	—	30	16	—	—	—	27	—	—	435
TOTAL	1,146	92	155	225	627	79	614	86	874	44	79	521	13	28	655	56	135	5,429

Source: Universities.

2261
TR59

TABLE 17. OVERSEAS STUDENTS AT AUSTRALIAN UNIVERSITIES, BY COUNTRY OF ORIGIN, 1968

University	Malaysia	Hong Kong	Singapore	Indonesia	Thailand	Vietnam	India	Pakistan	Other Asian Countries	New Zealand	Papua New Guinea	Fiji	Other Pacific Countries	Africa	U.K.	Other European Countries	U.S.A.	Canada	Other American Countries	Unspecified	Total
Sydney	165	130	48	28	28	14	10	23	54	14	51	21	12	26	17	8	26	9	4	—	688
N.S.W.	464	327	134	76	54	49	28	34	65	19	28	18	7	13	7	10	14	12	3	8	1,370
New England	79	4	3	17	6	1	3	4	1	10	10	4	3	10	—	—	—	—	—	21	176
Newcastle	37	24	18	15	3	1	2	1	2	2	—	—	—	1	—	—	—	1	—	—	107
Macquarie	3	—	—	1	1	—	—	—	2	2	2	1	—	2	4	1	2	1	—	—	22
Melbourne	190	92	43	24	13	5	12	3	37	12	9	3	3	7	19	22	14	15	4	—	527
Monash	212	52	43	19	18	11	21	4	15	10	3	5	—	8	15	9	7	3	2	—	455
La Trobe	29	—	—	—	—	4	—	1	—	—	—	—	—	—	—	1	1	1	—	—	37
Queensland	154	36	52	14	12	11	15	9	12	15	59	22	11	9	8	3	10	3	1	—	456
Townsville	5	1	2	—	—	4	—	—	—	—	3	2	—	—	—	—	—	—	—	—	17
Adelaide	170	41	43	6	3	7	4	9	10	4	5	3	3	7	14	2	4	4	2	—	343
Flinders	15	2	—	—	—	—	3	1	2	5	1	—	—	1	1	2	2	—	1	—	34
W.A.	272	65	80	21	22	18	9	2	6	4	5	3	1	8	15	—	10	4	—	—	545
Tasmania	104	23	13	23	16	10	1	—	—	2	—	15	1	5	3	—	5	2	—	—	217
A.N.U.	45	22	8	9	4	5	22	6	23	30	12	9	—	7	93	21	42	16	1	40	435
TOTAL	1,944	819	487	235	176	140	130	97	227	147	188	106	41	104	196	79	137	71	18	69	5,429

Source: Universities.

ANNEXE 3.1

24

3175/1969

THE AUSTRALIAN NATIONAL UNIVERSITY

AVCC SUB-COMMITTEE ON AUSTRALIAN-ASIAN UNIVERSITIES' CO-OPERATION SCHEME

Statement prepared in the Department of External Affairs

OUTLINE OF PROCEDURAL ARRANGEMENTS FOR AN AUSTRALIAN-ASIAN UNIVERSITY AID AND CO-OPERATION SCHEME

Purpose

To stimulate the development of a programme of aid and co-operation between Australian universities and a selected university in Indonesia, in Singapore and in Malaysia, especially in research and teaching associated with food production, and possibly population control if facilities available permit.

To provide financial support for such a programme, consistent with Australian External Aid objectives and to control the expenditure of official funds;

To co-ordinate the implementation of a continuing programme of this nature through the existing administrative machinery of the External Aid Branch of the Department of External Affairs.

Principles

In achieving the purposes outlined above, it is proposed that the following general principles should be observed:

(a) That Government financial assistance for Inter-University Aid should be separate from existing inter-governmental technical co-operation arrangements, but closely co-ordinated with them;

(b) .. that the scheme will directly involve Australian universities and Asian universities;

Statement prepared in the Department of External Affairs

OUTLINE OF PROCEDURAL ARRANGEMENTS FOR AN AUSTRALIAN-ASIAN UNIVERSITY AID AND CO-OPERATION SCHEME

Purpose

To stimulate the development of a programme of aid and co-operation between Australian universities and a selected university in Indonesia, in Singapore and in Malaysia, especially in research and teaching associated with food production, and possibly population control if facilities available permit.

To provide financial support for such a programme, consistent with Australian External Aid objectives and to control the expenditure of official funds;

To co-ordinate the implementation of a continuing programme of this nature through the existing administrative machinery of the External Aid Branch of the Department of External Affairs.

Principles

In achieving the purposes outlined above, it is proposed that the following general principles should be observed:

(a) That Government financial assistance for Inter-University Aid should be separate from existing inter-governmental technical co-operation arrangements, but closely co-ordinated with them;

(b) that the scheme will directly involve Australian universities and Asian universities;

(c) that official funds would not be sought for independent foreign aid projects undertaken by individual universities;

(d) that a separate administrative machinery would not be established;

(e) that Asian academics trained in Australia should return to the service of their own institutions upon completion of the approved programme of research or training in Australia under the Scheme;

(f) that the universities' involvement in the proposed arrangements would not prejudice their willingness or ability to assist in the provision of training and export personnel requested by other governments under existing Australian bilateral technical co-operation schemes;

(g) that official funds will not be provided directly for the universities' own use in inter-university aid projects.

Procedure

(a) An initial feasibility survey would be carried out by representatives of the participating Australian Universities, Australian Aid officials, the Governments concerned;

(b) The Governments of Malaysia, Singapore and Indonesia would be invited by Australian diplomatic missions to approve the recipient universities participation in the proposals, on the basis of the findings of the initial survey;

(c) On approval by the Australian Vice-Chancellors' Committee and the Australian Government, the designated recipient universities would be asked to submit proposals for assistance from Australian universities within broadly stated financial limits, covering a three year period. In drawing up proposals for assistance the recipient universities should be assisted by visiting representatives from the Australian university or faculty whose aid was to be requested. The representatives of the Australian universities or faculties would report on the feasibility of the programmes, including the recipient universities' plans for co-ordinating the assistance provided by Australia with their own internal plans for development.

(d) Proposals submitted by each recipient university with the report of the representatives of the Australian university visiting team would be examined by a sub-committee of the Vice-Chancellors' Committee and referred to the government with specific recommendations as to the role of each participating Australian university in the implementation of the requests for assistance, including an estimate of the costs to be met from Australian Aid funds.

(e) The recommendation of the Vice-Chancellors' Sub-Committee would be examined by an interdepartmental committee consisting of the Departments of External Affairs, Education and Science and the Treasury prior to the drafting of External Aid Estimates for the forthcoming financial year.

(f) A joint committee comprising the Vice-Chancellors' Sub-Committee and the interdepartmental committee would consider the proposals and submit its recommendations for the three year programme to the government.

(g) The nature of assistance to be provided should be as flexible as possible, but in general it would consist of:

(a) An initial feasibility survey would be carried out by representatives of the participating Australian Universities, Australian Aid officials, the Governments concerned;

(b) The Governments of Malaysia, Singapore and Indonesia would be invited by Australian diplomatic missions to approve the recipient universities participation in the proposals, on the basis of the findings of the initial survey;

(c) On approval by the Australian Vice-Chancellors' Committee and the Australian Government, the designated recipient universities would be asked to submit proposals for assistance from Australian universities within broadly stated financial limits, covering a three year period. In drawing up proposals for assistance the recipient universities should be assisted by visiting representatives from the Australian university or faculty whose aid was to be requested. The representatives of the Australian universities or faculties would report on the feasibility of the programmes, including the recipient universities' plans for co-ordinating the assistance provided by Australia with their own internal plans for development.

(d) Proposals submitted by each recipient university with the report of the representatives of the Australian university visiting team would be examined by a sub-committee of the Vice-Chancellors' Committee and referred to the government with specific recommendations as to the role of each participating Australian university in the implementation of the requests for assistance, including an estimate of the costs to be met from Australian Aid funds.

(e) The recommendation of the Vice-Chancellors' Sub-Committee would be examined by an interdepartmental committee consisting of the Departments of External Affairs, Education and Science and the Treasury prior to the drafting of External Aid Estimates for the forthcoming financial year.

(f) A joint committee comprising the Vice-Chancellors' Sub-Committee and the interdepartmental committee would consider the proposals and submit its recommendations for the three year programme to the government.

(g) The nature of assistance to be provided should be as flexible as possible, but in general it would consist of:

(i) fellowships for research and staff training in Australia;

(ii) travelling awards for Australian professors and lecturers attached to the recipient university to assist and train local staff;

(iii) the supply of library text books and reference books;

(iv) the supply of laboratory equipment.

3198/1969
9 September, 1969

THE AUSTRALIAN NATIONAL UNIVERSITY

Australian-Asian Universities'
Co-operation Scheme

A summary of the views of the AVCC Sub-committee

1. ASSUMPTION:

The Australian government is prepared to enter into consultation with the universities on a program of co-operation between the Australian universities and Southeast Asian universities.

2. SOME GENERAL CONSIDERATIONS RELATING TO CONSULTATIONS AND PLANNING:

2.1 There seems to be agreement between DCA and the Sub-committee on:

(a) Ministerial qualifications that visiting Asians should not stay in Australia; that the program should not be a roundabout way of subsidizing Australian universities nor inhibit Government from calling on universities for assistance outside of it; and that other individual projects could be fitted into its framework.

(b) limiting the program to Indonesia, Malaysia and Singapore (the 'recipient countries') in the first instance.

(c) the need for a degree of involvement by the governments of the recipient countries.

(d) programming and evaluation on a rolling, triennial basis.

(e) effective participation by the Australian universities in choosing their Asian counterparts and the types of project to be undertaken.

(f) awards to Asian visitors, which should normally be at senior-postgraduate levels.

(g) the application of part of the aid to books and equipment.

2.2 Beyond these points of agreement, there is need for particular

Co-operation Scheme

A summary of the views of the AVCC Sub-committee

1. ASSUMPTION:

The Australian government is prepared to enter into consultation with the universities on a program of co-operation between the Australian universities and Southeast Asian universities.

2. SOME GENERAL CONSIDERATIONS RELATING TO CONSULTATIONS AND PLANNING:

2.1 There seems to be agreement between DCA and the Sub-committee on:

(a) Ministerial qualifications that visiting Asians should not stay in Australia; that the program should not be a roundabout way of subsidizing Australian universities nor inhibit Government from calling on universities for assistance outside of it; and that other individual projects could be fitted into its framework.

(b) limiting the program to Indonesia, Malaysia and Singapore (the 'recipient countries') in the first instance.

(c) the need for a degree of involvement by the governments of the recipient countries.

(d) programming and evaluation on a rolling, triennial basis.

(e) effective participation by the Australian universities in choosing their Asian counterparts and the types of project to be undertaken.

(f) awards to Asian visitors, which should normally be at senior-postgraduate levels.

(g) the application of part of the aid to books and equipment.

2.2 Beyond these points of agreement, there is need for particular examination of the suggestions that:

(a) the program should be conceived in terms of raising the general level of the recipient universities and, through them, of helping to solve the problems of their countries. This conception implies a continuing association over a period of time and the construction of a framework which will accommodate a number of applied projects;

2/...

(b) as a first step towards constructing a framework a seminar, sponsored by the AVCC and Government, should be held in Canberra for selected persons in Australian universities and from Government who have had experience in the recipient countries. The purpose of the seminar would be to pool experience and knowledge of gaps and opportunities;

(c) there should be a reconnaissance of the recipient countries, possibly by a small mission from Australia, before a final framework and program is adopted;

(d) although the program should be essentially a governments/universities undertaking, it should be flexible enough to secure co-operation from international agencies, foundations, professional bodies with research and educational functions and research institutions in suitable circumstances;

(e) the program should primarily cover assistance with existing projects in recipient universities but not necessarily exclude new projects nor provision for essential capital expenditure on buildings and major items of equipment for which purpose the assistance of the World Bank might be sought;

(f) there should be financial provision to enable the Australian universities to replace staff seconded to recipient universities;

(g) remuneration and conditions of service should be established for both the secondment of Australian universities' staff and awards to Asian visitors to Australia; and

(h) consideration should be given to the joint-administration of the program in discussions on the relationship between the Australian Government and universities.

3. RECOMMENDED PROCEDURE:

The purpose of the seminar would be to pool experience and knowledge of gaps and opportunities;

(c) there should be a reconnaissance of the recipient countries, possibly by a small mission from Australia, before a final framework and program is adopted;

(d) although the program should be essentially a governments/universities undertaking, it should be flexible enough to secure co-operation from international agencies, foundations, professional bodies with research and educational functions and research institutions in suitable circumstances;

(e) the program should primarily cover assistance with existing projects in recipient universities but not necessarily exclude new projects nor provision for essential capital expenditure on buildings and major items of equipment for which purpose the assistance of the World Bank might be sought;

(f) there should be financial provision to enable the Australian universities to replace staff seconded to recipient universities;

(g) remuneration and conditions of service should be established for both the secondment of Australian universities' staff and awards to Asian visitors to Australia; and

(h) consideration should be given to the joint-administration of the program in discussions on the relationship between the Australian Government and universities.

3. RECOMMENDED PROCEDURE:

3.1 The Sub-committee should hold consultations with representatives of the Government as authorized by the AVCC at its meeting on 18/19th June, 1968 as soon as Government is ready.

3.2 The objective of the consultations should be the preparation of an agreed draft proposal defining the problem and recommending a framework for a program and means of administration.

3.3 The proposal, when accepted in principle by Government and the AVCC should be sent to each university with an invitation to participate.

3.4 The AVCC should determine the machinery required for further consultation with Government in the light of the universities' replies.

File: 14.1.2.7

Note: This paper is a re-draft of sub-committee paper 296A/1969 the text of which was accepted by the Department of External Affairs. The only change of substance is in para. 2.2 (d) where the words "professional bodies with research and educational functions" have been added by resolution of the sub-committee on 5 September, 1969.

(h) The administration of the approved programme including the authorisation of payments, processing of candidates for fellowships, arrangements for visits and supply of books and equipment would be handled through the existing machinery of the External Aid Branch of the Department. The machinery of the Aid Branch would be arranged to permit prompt action and the use, where necessary, of the stores and purchasing arrangements of participating universities.

(i) The proposed joint committee would form an organisational framework under which funds could be attracted both from inter-governmental organisations such as U.N.E.S.C.O. and W.H.O., which have participated in university "pairing" arrangements between developed and lesser developed countries, and private foundations such as Ford, Carnegie and Rockefeller.

Costs

The cost and volume of the proposed activities would depend to a large degree upon the resources in personnel and equipment which Australian universities were prepared to devote to the scheme and the funds allocated by the government to it. A programme of the order of $100,000 has been approved for the feasibility study and the initial years operations.

26 August, 1969.

File: 14.1.2.7